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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

HO, TUAN V

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/813,520	Applicant(s) SINGH ET AL.	
	Examiner Tuan V Ho	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 23-26, 29-32, 1, 2-8, 11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Moberg et al (US 4,794,459).

With regard to claim 23, Moberg et al discloses in Fig. 1, columnar focusing indicator for a manually video camera that comprises the indication of sharpness of focus (column 9a includes transition 9c, col. 4, lines 18-29 and lines 41-52), camera that includes a lens having a manually adjustable focus control (lens assembly 4 includes a knurled exterior ring that is used to manually adjust a focusing operation of the video camera, col. 3, lines 16-28), a light sensor that produces image data in response to light passing through the lens (image sensor 2, col. 3, line 18), logic device coupled to receive the image data from the light (video processing circuit 6 working in combination with focus aid circuit 8 processes image signals from image sensor 2 in accordance with an image processing logic, col. 3, lines 34-46), indicator, coupled to the logic device, said indicator being adapted to provide an indication of a sharpness of focus of the lens (column region 9a of monitor 9, col. 3, lines 47-60 and col. 4, lines 41-55), logic device being configured to implement a plurality of functions, including: (i)

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processing the image data from the light sensor to determine a sharpness value indicative of a focus of the lens (a luminance signal generated by processing circuit 6 and focus aid circuit 8 is used as focusing value indicative a focus of lens assembly 4, col. 3, lines 34-60); and (ii) indicating to a user the focus of the lens with the indicator, as a function of the sharpness value, so that a user can determine when the lens is sharply focused (a dc control signal is used as indicator as a function of sharpness value so that a user can determine when a lens is in-focused by adjusting the focusing ring, col. 3, lines 63-68 and col. 4, lines 1-23).

With regard to claim 24, Moberg et al discloses in Fig. 1, columnar focusing indicator for a manually video camera that comprises the at least one of the logic device and the indicator are disposed within the camera (the video camera includes circuits 6 and 8 and monitor 9).

With regard to claim 25, Moberg et al discloses in Fig. 1, columnar focusing indicator for a manually video camera that comprises the indicator comprising at least visual indicator (column 9a and transition 9c).

With regard to claim 26, Moberg et al discloses in Fig. 1, columnar focusing indicator for a manually video camera that comprises the visual indicator comprises at least one of a

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graphic display that is indicative of the sharpness value (column 9a and transition 9c are graphic display indicators).

With regard to claim 29, Moberg et al discloses in Fig. 1, columnar focusing indicator for a manually video camera that comprises the image data comprise a luminance value for each of a plurality of pixels comprising the image (a luminance signals within window 9b is used for a focus value, col. 3, line 47-63), said logic device: (a) determining a luminance value for pixels comprising the image (focus aid circuit 8 uses luminance signals from image signals provided by circuit 6), (b) comparing the luminance value of pixels that are adjacent to each other to determine differences in their luminance values (according to an in-focused image, a magnitude of high frequency content of pixels along the edge of an object image is higher than the other pixels of the object is used for focusing values; in other words, focus aid circuit 8 compares the pixels along the edges of an object with the other ones, col. 3, lines 56-68 and col. 9, lines 10-40); and (c) determining the sharpness value as a function of the differences in the luminance values (focus aid circuit 8 determines the focusing value in accordance with the high frequency content of luminance signals).

With regard to claim 30 Moberg et al discloses in Fig. 1, columnar focusing indicator for a manually video camera that

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comprises the pixels are disposed in one or more predetermined regions of the image (pixels are disposed in window 9b, which are used to determine the sharpness).

With regard to claim 31, Moberg et al discloses in Fig. 1, columnar focusing indicator for a manually video camera that comprises the processor determines a running total of the differences in at least one of a horizontal and a vertical direction (focus aid circuit 8 determines pixels which is arranged in horizontal and vertical directions of image sensor 2).

With regard to claim 32, Moberg et al discloses in Fig. 1, columnar focusing indicator for a manually video camera that comprises the logic device weights the difference in the luminance for pixels in at least one predefined portion of the image, when determining the sharpness value (window 9b is used for processing a focusing value, col. 3, line 60).

With regard to claim 1, Moberg et al discloses in Fig. 1a video camera including a manual focusing device, which comprises the steps of processing an image data (circuits 6 and 8 generates focusing values based on signals within widow 9b, col. 3, line 60).

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Method claims 2, 3, 4, 5, 6 and 7 correspond to apparatus claim 29, 31, 30, 32, 25 and 26 respectively and are analyzed the same as discussed in the apparatus claims.

With regard to claim 8, Moberg et al discloses in Fig. 1, a video camera that comprises the steps of displaying a visual indicator (column indicator 99a includes transition bar 9c which is used to indicate maximum and minimum focusing values so that a user can easily control a focusing operation of the camera, col. 4, lines 41-55).

Method claim 11 and 13 correspond to apparatus claims 24 and 26.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered

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therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 27, 28, 9, 10, 12, 14, 15, 33-40, 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moberg et al.

With regard to claim 27, Moberg et al discloses the same subject matter as discussed with respect to claim 25, except that the audio indicator produces an audible sound having a frequency that is indicative of sharpness value.

Moberg et al does not explicitly disclose any audio indicator; however, Official Notice is taken that audible sound is used as a warning indication.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify focus aid circuit 8 Moberg et al so as to provide audible warning sound that is indicative a sharpness of an image. This is because modifying the Moberg indicator with an audible

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warning sound would allow a user to focus an object image while viewing the image in an optical view finder and thereby to facilitate camera operations.

With regard to claim 28, Moberg et al discloses the same subject matter as discussed with respect to claim 23, except that the camera is adapted to coupled to a host computing device in which at least one of the indicator is disposed.

Moberg et al does not explicitly disclose any host computing device. However, Official Notice is taken that a video camera is connected to a computer including a display to view an image from the camera.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to connect the camera of Moberg et al with a computer so as to view an image on the display of computer. This is because the replacement of monitor 9 of Moberg et al with a monitor of a computer would allow a user to easily and conveniently to view the image while controlling the camera through the computer.

With regard to claim 9, method claim 9 corresponds to apparatus claim 27.

With regard to claim 10, Moberg et al discloses the same subject matter as discussed with respect to claim 1, except that the steps of enabling the user to link the camera in

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communication with a host computing device so that the step of processing the image data is carried out by the host computing device.

Official Notice is taken that a video camera is connected to a computer so that the computer can process raw image data signal from the camera.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to connect the video camera of Moberg et al with a computer so the computer can process image data from the camera because the modification of the Moberg camera would allow a user control the camera from a personal computer and thereby to easily to transmit the data through Internet and improve camera communications with other computer user.

Method claim 12 corresponds to apparatus claim 27.

With regard to claim 14, Moberg et al discloses the same subject matter as discussed with respect to claim 1, except that processing the image data includes the step of determining a weighted average of luminance fro different region of the image.

Moberg et al does not explicitly disclose any step of determining a weighted average of luminance for different region of the image. However, Official Notice is taken for a method of determining a weighted average of luminance for different region

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of the image. As a result, the method provides more accurate luminance distributions on an image area and thereby to improve the accuracy of processing method.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement a method of determining a weighted average of luminance for different region of the image in the processing circuits of Moberg et al in order to provide average of luminance of different areas of the image and thereby to improve the accuracy of determining step.

With regard to claim 15, Moberg et al discloses the same subject matter as discussed with respect to claim 1, except that a memory medium on which machine readable instruction are stored, said machine readable instructions, when implement by a processor.

Moberg et al does not explicitly discloses any processor that includes a memory medium storing machine readable instruction to perform the focus operation. However, Official Notice is taken for a processor (CPU) is used to replace a hardwire device by using software instructions stored in a memory; as a result, the operations of the processor is easily to implement and modify by changing the software instructions.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace video signal processing 6 of Moberg et al with a processor (CPU) including a memory medium storing machine readable instruction, so as to digitally control processing the image signal into focusing signals and thereby to improve the efficiency of the camera system of Moberg et al.

Apparatus claim 33 corresponds to apparatus claim 15 and analyzed the same as discussed with respect to apparatus claim 15.

Claims 34, 35, 36, 37, 38, 39 and 40 recite what was discussed with respect to claims 2, 3, 4, 5, 6, 7 and 8 respectively.

With regard to claims 41 and 42, Moberg et al discloses the same subject matter as discussed with respect to claim 33, except that the logic device readable medium comprises an audio transducer coupled to the logic device.

Moberg et al does not explicitly disclose any audio transducer coupled to the logic device; however, Official Notice is taken that an audio transducer providing audible sound is used as a warning indication with a varying audible frequency.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to connect

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an audio transducer focus aid circuit 8 Moberg et al so as to provide audible warning sound that is indicative a sharpness of an image. This is because modifying the Moberg video camera with an audio transducer providing a warning sound would allow a user to focus an object image while viewing the image on a viewfinder without looking at the column indicator and thereby to make a fast focusing operation. Noted that the varying audible sound levels provide a degree of focusing operations whether the image is in-focused or not.

Claim 43 recites what was discussed with respect to claim 7.

Claim 44 recites what was discussed with respect to claim 14.

6. Claims 16-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizumura (US 6,526,232) in view of Moberg et al:

With regard to claim 16, Mizumura discloses in Figs. 5 and 6, a TV camera lens controller (col. 3, line 25) assisting a user to manually focus, which includes a personal computer and monitor; the controller comprises the host computing device (PC 20 processes lens focus signals from TV camera 12 so as to control the focus operation, col. 3, lines 55-60 and col. 7,

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lines 16-45), and display (monitor 22), except that the steps of (a) digitally processing the image data from the camera using the host computing device, to determine a sharpness value indicative of a focus of the camera; (b) in response to changes in the focus caused by the user adjusting the focus of the camera, again determining the sharpness value by digitally processing the image data; and (c) indicating the sharpness of focus of the camera to the user as a function of the sharpness value.

Mizumura teaches using a personal compute with a monitor to manually control a TV camera lens assembly and display the control indication on monitor 200. However, Mizumura does not explicitly disclose any steps of (a) to (c).

Moberg et al discloses in Fig. 1, a columnar focusing indicator for a manually video camera that comprises an indication of sharpness of focus (column 9a includes transition 9c, col. 4, lines 18-29 and lines 41-52 and lens assembly 4 includes a knurled exterior ring that is used to manually adjust a focusing operation of the video camera, col. 3, lines 16-28), comprising the steps of processing the image data (image sensor 2, col. 3, line 18, and video processing circuit 6 working in combination with focus aid circuit 8 processes image signals from image sensor 2 in accordance with an image processing

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logic, col. 3, lines 34-46), in response to changes in the focus caused by the user (a luminance signal generated by processing circuit 6 and focus aid circuit 8 is used as focusing value indicative a focus of lens assembly 4 by a user activation, col. 3, lines 34-60); and indicating the sharpness of focus of the camera to the user as a function of the sharpness value (a dc control signal is used as indicator as a function of sharpness value so that a user can determine when a lens is in-focused by adjusting the focusing ring, col. 3, lines 63-68 and col. 4, lines 1-23). As a result, Optimum focus is obtained by adjusting the focus and bringing the transition to its lowest position in the column (see abstract).

7. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the TV camera control system of Mizumura as the same fashion as disclosed by Moberg et al in order that PC 20 digitally processes image signals from image sensor 2 to determine focusing value in response to the changes in focus caused by a user and indicating the sharpness of focus as column bar indications 9a and 9c to the user on monitor. This is because the modification of the Mizumura with the manual control focusing lens camera of Moberg et al would allow a user to

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easily control a video camera mounted on a computer and thereby to easily to communicate with other user through Internet.

Claims 18 and 19 recite what was discussed with respect to claims 30 and 31.

With regard to claim 20, claim 20 recites what was discussed in claim 14.

Claim 21 recites what was discussed with respect to claim 25.

Claim 22 recites what was discussed with respect to claim 8.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Surdyker (US 4,775,892) discloses a manual control device for a video camera.

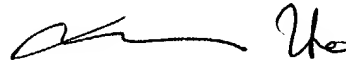
Karube et al (US 6,670,985) discloses an image sensing apparatus that includes a personal computer.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUAN HO whose telephone number is (703) 305-4943. The examiner can normally be reached on Mon-Fri from 7AM to 4PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen, can be reached on (703) 308-9644. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



TUAN HO

Primary Examiner

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